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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,087	12/13/2001	Kazuyuki Yokoyama	P6402a	6539

20178 7590 12/28/2006

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EXAMINER	
KANG, ROBERT N	
ART UNIT	PAPER NUMBER
2625	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/017,087	YOKOYAMA ET AL.
	Examiner	Art Unit
	Robert N. Kang	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *46-59 and 63-76* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *46-48,54-59,63-65 and 71-76* is/are rejected.

7)☒ Claim(s) *49-53 and 66-70* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 July 2006* is/are: a)☒ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant has elected Group I (claims 46-59 and 63-77). Claims 60-62 and 77-79 will not be further examined.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 46-59 and 63-77 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant replies in his response dated 7/25/2006, "the new claims further provide more precise definitions for the 'printable colors.' Depending of [sic] the mechanical limitations of a printer, the 'printable colors' may refer either to the number of available inks (and color of the printing medium) or alternatively refer to **a number of visually discernable colors obtainable by combining the number of available inks (and printing medium color) into pixels defined by multiple printable dots"** [emphasis added].

Paragraph 0006 of the PG-pub states "it will also be noted that 'color reduction' is used herein to mean reducing color depth or to convert an image into a gray scale or halftone image." Additionally, paragraph 0049 discloses "the source data is displayed after reducing source data colors to a specific number of colors if the source data

contains many colors. In this manner, color selection or assignment is thus made easier. More specifically, color selection or assignment is extremely difficult with a full color image, but color selection or assignment is relatively simple if it is based on an image first reduced to only eight colors, for example." Figures 17(a) and (b) show the user interface for the second conversion from the "intermediate number of colors" (8) to another number of colors (15 and 3, respectively). The 8 colors are: R, G, B, C, M, Y, K, and white.

It is stated in paragraph 0049, "More specifically, color selection or assignment is extremely difficult with a full color image, but color selection or assignment is relatively simple if it is based on an image first reduced to only eight colors," and the examiner assumes for the purposes of this rejection that the reduction to the intermediate (8) colors is a reduction to 8 "pure" colors, i.e., pure white, black, cyan, magenta, etc. etc., with **no mixtures**.

Double Patenting

3. Claims 46 and 63 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 5 of U.S. Patent No. 7,085,006. Claim 5 discloses generating print data (of which logos are merely a specific, obvious type) including the first step, (a), of "reducing full-color digital image data to reduced-color digital image data by reducing the color of each pixel in the full-color digital image data to one of predetermined number of colors, wherein the predetermined number of colors is eight or less." This is similar in diction and identical in function to the limitation

"applying a first color changing step for changing the number of colors of said original source data from said second number of colors (the number of colors in the source data) to said intermediate number of colors."

Claim 5 also includes step (b), "generating two-color print data by converting each color in the reduced-color digital image data to a main color, a secondary color, or a background color," which is similar in language and completely identical in function to the second operation in claims 46 and 63, "applying a second color changing step different from said first color changing step for changing the number of colors of said original source data from said intermediate number to a number not greater than said first number."

Regarding the differences- "a step for obtaining original source data having a second number of colors, said second number being greater than said first number," because the patented claim 5 already has the original source data, clearly it was *obtained.* Additionally, the source data's color is *reduced* to 8; therefore it necessarily has *more than 8 colors.* Therefore, the "second number" (colors in the source data) is greater than both the "first number" (printable colors of the printer) as well as the "intermediate number of colors" (8).

Regarding the step of "a display step for displaying a first image representation of original source data," Examiner asserts that this is an obvious variation of the '006 patent using an "image preview function," a feature that was well-known in the industry at the time of invention. Examiner references but does not rely upon Kanno (US 6,434,266, filed 6 years before the applicant's priority date), who discloses in column 5,

lines 17-25, "when color conversion processing is started by operating the color conversion mode function keys 204 after setting an original, the original is scanned and an original image is displayed on the image display 201.... An image converted in accordance with the designation is displayed." The addition of an "image preview function" therefore renders claims 47, 48, 64, and 65 unpatentable over the '006 patent as well.

4. Claims 54 and 71 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 5 of U.S. Patent No. 7,085,006. Claim 5 discloses a first conversion to 8 or less colors (step a) followed by a second conversion to 3 colors including the paper color (step b). Therefore, claim 5 inherently includes the limitation "wherein said intermediate number is greater than said first number of printable colors."

5. Claims 55-57 and 71-74 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 6 of U.S. Patent No. 7,085,006. Claim 6 discloses "step (b)(1) generates two-color print data by converting each color in the reduced-color digital image data to the main color, the secondary color, or the background color." This is identical to the claim 55/71 limitation, "wherein the first number of printable colors is defined by the printer's number of ink sources plus a color of the printer's printing medium." Claim 6 discloses "step (b)(1) generates two-color print data by converting each color in the reduced-color digital image data" to 3 colors,

therefore meeting the 56/72 claim limitation "wherein said second color changing step assigns one of said printable colors to each of the intermediate number of colors." Finally, claim 6 of the '006 patent discloses reducing to 8 colors then to 3 colors, thereby meeting the requirement of claims 57 and 74, "wherein said intermediate number is 8 and said first number is 3."

6. Claims 58, 59, 75, and 76 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 5 of U.S. Patent No. 7,085,006 in view of Frendlund (US 5,666,215).

Claim 5 discloses generating print data (of which logos are merely a specific, obvious type) including the first step, (a), of "reducing full-color digital image data to reduced-color digital image data by reducing the color of each pixel in the full-color digital image data to one of predetermined number of colors, wherein the predetermined number of colors is eight or less." This is similar in diction and identical in function to the limitation "applying a first color changing step for changing the number of colors of said original source data from said second number of colors (the number of colors in the source data) to said intermediate number of colors."

Claim 5 also includes step (b), "generating two-color print data by converting each color in the reduced-color digital image data to a main color, a secondary color, or a background color," which is similar in language and completely identical in function to the second operation in claims 46 and 63, "applying a second color changing step different from said first color changing step for changing the number of colors of said

original source data from said intermediate number to a number not greater than said first number."

Claim 5 does not expressly disclose "a second user-submitted image processing step for requesting a change in the size of said original source data; wherein in response to said first and second user-submitted image processing steps, the request for a change in the size of said original source data is executed prior to execution of the request for a change in the number of colors of said original source data."

Frendlund discloses in column 7, lines 44-51, "the image is then resized (118) based on the desired final image size and the image printer's writing resolution (i.e., pixels per inch). The previous two steps are sometimes reversed to eliminate unnecessary pixel computations (e.g. color correction may be performed after resizing when the resulting image is to be significantly reduced in size to avoid color correcting pixels which would never be printed as a result of a subsequent resizing step)." Therefore, he teaches both a "user submitted image processing step for requesting a change in the size of said original source data" as well as performing the size change prior to execution of the color correction (reduction in number of colors).

The '006 patent and Frendlund are combinable because they both pertain to image correction and print sizing. Furthermore, Examiner asserts that Frendlund teaches concepts that were well-known and obvious at the time of invention. Examiner also cites MPEP 2144 which states that "the reason or motivation to modify the reference may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the

combination to achieve the same advantage or result discovered by applicant." Therefore, utilizing Frendlund to establish a case of obviousness is permissible.

Therefore, it would have been obvious to one of normal skill in the art to include in the '006 patent an image resizing function which is performed before color correction.

The motivation of this modification would be to allow the user to resize the image to the desired print size and reduce the amount of unnecessary processing.

Thus it would have been obvious to combine the '006 patent and Frendlund to obtain the invention as disclosed in claims 58, 59, 75, and 76.

Allowable Subject Matter

7. Claims 49-53 and 66-70 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

8. Claim49-53 and 66-70 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert N. Kang whose telephone number is 571-272-0593. The examiner can normally be reached on M-F 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler M. Lamb can be reached on (571)272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RNK

TWYLER LAMB
SUPERVISORY PATENT EXAMINER